APPENDIX 31-1

ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

Primary Risk ID	Potential Risk	Possible Cause	Secondary Risk ID	Environmental Effect	Likelihood Rating	Basis of Likelihood	Consequence Rating	Basis of Consequence	Risk Score (Consequence x Likelihood)
Construction Phase									
A	**Critical Infrastructure Emergencies**	Offshore Site Extreme weather-storms, periods of heavy rainfall, taking into account climate change and strong winds	**A1**	Marine traffic incident at the marshalling harbour during infrastructure delivery or extreme weather periods of heavy rainfall, taking into account climate change and strong winds impacting critical infrastructure	2	The risk of marine traffic accident during offshore infrastructure delivery or port to vessel transfer and severe weather conditions severely impacting the identified transit route is very unlikely when considering the assessment in Chapter 30 Climate (weather conditions recorded over the last 30 years within the area) , Chapter 14: Shipping and Navigation and Appendix 5-10: Vessel Management Plan. In the case of severe weather being forecasted, the delivery schedule may be postponed to avoid these conditions, which may cause a delay in Project construction timelines.	2	The outcome of a marine traffic accident due to severe weather conditions during the construction phase will result in a limited consequence in that ' limited number of people affected; a few serious injuries with hospitalisation and medical treatment required.'.	4
		Onshore Site Extreme weather-storms, periods of heavy rainfall, taking into account climate change and strong winds Accident or incident at Moneypoint Powerstation	**A2**	Traffic accident during infrastructure delivery impacting critical infrastructure or extreme weather periods of heavy rainfall, taking into account climate change and strong winds Accident or incident at a Seveso Site	2	The risk of traffic accident during infrastructure delivery and severe weather conditions severely impacting the identified road network is very unlikely when considering the assessment in Chapter 30 Climate (weather conditions recorded over the last 30 years within the area) and Chapter 29: Traffic and Transport (Traffic Management Plan). In the case of severe weather being forecasted, the delivery schedule may be postponed to avoid these conditions. There is no potential for the Project to have an effect on Seveso Sites. There is a potential for Moneypoint Powerstation, an Upper Tier Seveso Site to have an effect on the Project. There is no potential for effects arising from the other Seveso Sites within the ZOI on the Project.	1	The outcome of a traffic accident due to severe weather conditions affecting critical infrastructure during the construction phase will result in a minor consequence in that 'small number of people would be affected' should a severe weather occur, with 'no fatalities and a small number of minor injuries with first aid treatment'. The outcome of an incident/accident at the Money point site during the construction phase will result in a minor consequence in that 'small number of people would be affected' with 'no fatalities and a small number of minor injuries with first aid treatment'. The outcome of the loss of grid connection infrastructure will result in a minor consequence in that a 'small number of people' would be affected' with no fatalities and any minor injuries being treated by first aid treatment.	2

B	**Severe Weather**	Offshore Site Extreme weather-storms, periods of heavy rainfall, taking into account climate change, strong winds and lightning	**B1**	Illness or loss of life; Damage to, or depletion of aquatic habitats and species;	3	The risk of severe weather is unlikely when considering the assessment in Chapter 30 and weather conditions recorded over the last 30 years within the area. Possible fall from height from offshore working platforms/vessels may occur during severe weather. The works programme for the construction phase of the Project will take account of weather forecasts and predicted strong winds in particular and construction will be paused if required. Therefore the risk is considered to be unlikely.	2	The outcome of severe weather conditions during the construction phase will result in a limited consequence in that 'limited number of people would be affected' should a severe weather occur, with 'a few serious injuries with hospitalisation and medical treatment required'	6
		Onshore Site Extreme weather-storms, periods of heavy rainfall, taking into account climate change, strong winds and lightning	**B2**	Illness or loss of life; Damage to, or depletion of aquatic habitats and species;	3	Severe weather may cause increased mobilisation of sediment or weakening of trenches, leading to trench collapse. Both incidents will be controlled via the Onshore Site design and best practice construction methodologies and are therefore considered to be unlikely.	1	The outcome of severe weather conditions during the construction phase will result in result in a minor consequence in that 'small number of people would be affected' should a severe weather occur, with 'no fatalities and a small number of minor injuries with first aid treatment'. Severe weather may cause increased mobilisation of sediment which will be controlled via the Proposed Project design and mitigation measures.	3
C	**Sea Level Rise/Coastal Erosion**	Offshore Site The Offshore Site is not considered in this scenario as there is no potential for flood risk arising from sea level rise	**C1**						
		Onshore Site Extreme weather periods taking into account climate change	**C2**	Coastal Flooding and Storm Surges Coastal Erosion	4	Coastal flooding is caused by higher sea levels than normal, largely as a result of storm surges, resulting in the sea overflowing onto the land. It is likely that climate change will have significant impacts on flooding and flood risk in Ireland due to rising sea levels, increased winter rainfall and more intense rainfall.	1	Coastal flood mapping has been completed for the Mid-Range and High-End Scenario of an increase in rainfall of 20% and 30% respectively, which includes a 0.5m and 1m rise in sea levels. The modelled flood zones associated with these future scenarios do not differ significantly to those described in the baseline in Appendix 23-1: FRA. Therefore, coastal flood zones at the Onshore Site are unlikely to be significantly impacted by future climate change and the outcome would result in a minor consequence in that 'small number of people would be affected' with 'no fatalities and a small number of minor injuries with first aid treatment'.	4

D	**Utility emergencies**	Offshore Site Construction activity along proposed Offshore Export Cable (OEC) route impacting on national services and utilities.	**D1**	Illness or loss of life; Disruption to services	2	Materials and design methodology will be agreed with all undersea cable operators in a crossing agreement, and any cable crossings shall be completed in accordance with International Cable Protection Committee specifications. as outlined on Chapter 5 As such the risk of a utility emergency occurring during the construction of the Offshore Export Cable is considered very unlikely	1	The outcome of an impact on utilities and services during the construction phase will result in a minor consequence in that 'small number of people would be affected, with 'no fatalities and a small number of minor injuries with first aid treatment'.	2
		Onshore Site Construction activity along proposed Onshore Grid Connection(OGC) route impacting on national services and utilities.	**D2**	Illness or loss of life; Disruption to services	2	Confirmatory surveys will be carried out by the Contractor to ensure that there are no interactions with existing utilities and services along the Onshore Grid Connection route. Construction of the OGC will be carried out as detailed in the Appendix 5-4 Onshore Construction and Environmental Management Plan and therefore the risk is considered to be very unlikely.	1	The outcome of an impact on utilities and services during the construction phase will result in a minor consequence in that 'small number of people would be affected, with 'no fatalities and a small number of minor injuries with first aid treatment'.	2
E	**Traffic/Vessel Incident**	Offshore Site Driver negligence or failure of vessel operations on transport routes Lack of route planning, vessel machinery failure or navigational error within or in close proximity to the OAA Extreme weather event	**E1**	Injury or loss of life. Damage to offshore infrastructure	2	Construction vessels, including Restricted in their Ability to Manoeuvre (RAM) vessels will be present in the vicinity and within the Offshore Site during the construction phase. Activities associated with the construction of structures and cables may displace existing routes/activity and increase encounters and collision risk with other third-party vessels. Construction of the Offshore Site could lead to increased vessel densities within the area, which could in turn lead to an increase in vessel to vessel or vessel to infrastructure encounters and therefore increased collision or allision risk. The likelihood is considered to be very unlikely on the basis of compliance with the Convention on the International Regulations for Preventing Collisions at Sea (COLREGs) (International Maritime Organization (IMO), 1972/77) as outlined in Chapter 14 Shipping and Navigation	2	A minor consequence is predicted. Liaison with vessels with regards to agreed routeing destinations/ berth/ anchorage will remain the navigational priority at all times i.e., the marine coordinator will provide project vessels with relevant information as opposed to direct instruction on routeing; a 'small number of people would be affected' should a vessel collision or allision occur, with 'no fatalities and small number of minor injuries with first aid treatment.' Any release of oils/fluids that might arise due to collision would have a localised effect.	4

		Onshore Site Driver negligence or failure of vehicular operations on Onshore Site roads (Public road network in which the Onshore Grid Connection route is proposed). Traffic Management not implemented	**E2**	Injury or loss of life. Spillage of oils/fluids	2	Construction vehicles, HGVs and staff vehicles will be present within the Onshore Site during the construction phase. They will utilise existing third-party tracks and the public road network and will therefore interact with local road users. As such, it can be determined that there is some 'opportunity, reason or means' for a vehicle collision during the construction of the Project, 'at some time.' Throughout the construction phase, traffic management measures will be implemented at the Onshore Site as outlined in the Traffic Management Plan (Appendix 29-2). An unlikely risk is therefore predicted.	1	A vehicle incident could cause limited pollution of soil or an adjacent watercourse by the release of oil or other fluids. A minor consequence is predicted. Having regard to on-site speed limits and vehicular movements, a 'small number of people would be affected' should a vehicular collision occur, with 'no fatalities and small number of minor injuries with first aid treatment.'	2
F	**Fire / Gas Explosion**	Offshore Site Equipment or infrastructure failure; Fuel spillage/ storage Electrical problems; and Employee negligence. Interaction with unidentified UXO	**F1**	Illness or loss of life; Damage to, or depletion of habitats and species; and Impacts on ambient air quality.	2	In accordance with Chapter 19 of the Safety, Health and Welfare at Work Act 2005 (the 2005 Act), the Project shall be subject to a fire safety risk assessment which would assist in the identification of any major risks of fire on site, and mitigation of the same during construction. Chapter 5 and Appendix 5-4 outline the procedure to be followed in the unlikely event that an UXO is discovered within the Offshore Site. Based on pre-construction surveys and a UXO risk assessment conducted by the Applicant for the Offshore Site, the requirement for UXO clearance is very unlikely.	3	Should a fire/explosion occur at the Project, a serious consequence would result in that there would be a 'Significant number of people in affected area impacted with multiple fatalities , multiple serious or extensive injuries and significant hospitalisation. There will be 'normal community functioning' if the site is offshore with 'some inconvenience' to local vessel traffic. The 'generic command, control & co-ordination systems' as well as the 'common elements of response' detailed in the Galway County Council Major Emergency Plan will work to reduce the consequence (both on people and the environment) of potential fire/explosions at the Offshore Site.	6
		Onshore Site Equipment or infrastructure failure; Fuel spillage/ storage Electrical problems; and Employee negligence.	**F2**	Illness or loss of life; Damage to, or depletion of habitats and species; and Impacts on ambient air quality.	2	In accordance with Chapter 19 of the Safety, Health and Welfare at Work Act 2005 (the 2005 Act), the Project shall be subject to a fire safety risk assessment which would assist in the identification of any major risks of fire on site, and mitigation of the same during construction. As outlined in Chapter 5, a limited amount of fuel will be stored on site in designated areas and bunded appropriately to ensure containment and prevent spillages of fuel. No fuels, chemicals or solvents will be stored outside of the confines of the Onshore Site.	2	Should a fire/explosion occur at the Project, a limited consequence in that there would be 'a limited number of people affected' with 'localised effects of short duration' on people and environmental receptors due to the nature of the Project and the lack of infrastructure or fuel storage during operation that would result in any such incident. There will be 'normal community functioning' in the area with 'some inconvenience' The 'generic command, control & co-ordination systems' as well as the 'common elements of response' detailed in the Clare County Council Major Emergency Plan will work to reduce the consequence (both on people and the environment) of potential fire/explosions at the Onshore Site.	4

G	**Collapse/ damage to structures**	Offshore Site Earthquake, land slide, extreme weather events; Allision between Project or third-party vessels and OAA infrastructure	**G1**	Injury or loss of life.	1	According to the Irish National Seismic Network (INSN), earthquakes measuring ~2 on the Richter Scale are "normal" in terms of seismicity in Ireland. These are known as microearthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. As such, structures are extremely unlikely to be damaged or collapse due to seismic activity. Construction of the Offshore Site could lead to increased vessel densities within the area, which could in turn lead to an increase in vessel to infrastructure encounters and therefore increased allision risk. The potential for allision risk is addressed in Chapter 14 - Shipping and Navigation	2	The risk of infrastructure damage or collapse during the construction phase of the Offshore Site will result in a limited consequence in that 'a limited number of people affected' with 'localised effects of short duration' on people and environmental receptors due to the nature of the Offshore Site.	2
		Onshore Site Earthquake, land slide, extreme weather events; Vehicular collisions due to driver negligence on public roads. Traffic Management not implemented	**G2**	Injury or loss of life.	1	According to the Irish National Seismic Network (INSN), earthquakes measuring ~2 on the Richter Scale are "normal" in terms of seismicity in Ireland. These are known as microearthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. As such, buildings/structures in Ireland are extremely unlikely to be damaged or collapse due to seismic activity. Due to the transport of abnormal loads, i.e., OCC components, there is potential for road infrastructure collapse during delivery and is assessed in Chapter 14 Traffic and Transportation. This impact may be exacerbated by extreme weather i.e., severe wind storms and heavy precipitation resulting from climate change. The Project will utilise the existing road network during the construction phase. Based on the above the likelihood is extremely unlikely.	2	The risk of infrastructure damage or collapse during the construction phase of the Onshore Site will result in a limited consequence in that 'a limited number of people affected' with 'localised effects of short duration' on people and environmental receptors due to the nature of the Onshore Site.	2
Operational Phase									
H	**Critical Infrastructure Emergencies**	Offshore Site Internal infrastructure fault Damage from Offshore Site or third-party vessel or vehicle	**H1**	Illness or loss of life; Contamination of the environment due to Offshore Site infrastructure	1	Critical infrastructure failure due to internal failure is considered very unlikely if the Project is constructed and maintained under good practice and guidance recommendations, and manufacturing standards. Advisory safe clearance ranges of 50m from installed, operational WTGs are to be implemented for other users of the marine environment	1	The risk of internal infrastructure failure during the operational phase, due to internal fault or project damage will result in a minor consequence in that 'small number of people would be affected' should a severe weather occur, with 'no fatalities and a small number of minor injuries with first aid treatment'.	1

		Onshore Site Internal infrastructure fault Damage from Onshore Site or third-party vehicle Accident or incident at Moneypoint Powerstation.	**H2**	Illness or loss of life; Contamination of the environment due to Onshore Site infrastructure	1	Critical infrastructure failure due to internal failure is considered very unlikely if the Project is constructed and maintained under good practice and guidance recommendations, and manufacturing standards . Damage to the Onshore Site is considered very unlikely due to the majority of infrastructure being located underground, or in areas which the general public will not have access to. The Moneypoint Powerstation is subject to an extensive range of operational controls and mitigation measures as well as being governed by COMAH and therefore it is very unlikely that a significant accident or incident will arise that could impact the onshore site.	2	The risk of internal infrastructure failure during the operational phase, due to internal fault or project damage will result in a limited consequence in that 'a limited number of people affected' should a critical infrastructure emergency occur, with 'Localised displacement of a small number of people for 6-24 hours. Personal support satisfied through local arrangements. '.	2
I	**Severe Weather**	Offshore Site Extreme weather-storms, periods of heavy rainfall, taking into account climate change, strong winds and lightning	**I1**	Illness or loss of life;	3	The risk of severe weather is unlikely, when considering weather conditions recorded over the last 30 years within the area, This is outlined in the assessment in Chapter 30 . Operations and maintenance activities will be suspended as required in response to weather warnings.	1	The outcome of severe weather conditions during the Operational phase will result in a minor consequence in that 'small number of people would be affected' should a severe weather occur, with 'no fatalities and a small number of minor injuries with first aid treatment'. Operation and maintenance of the site will only be carried out under suitable weather conditions and therefore works during severe weather will be avoided.	3
		Onshore Site Extreme weather-storms, periods of heavy rainfall, taking into account climate change, strong winds and lightning	**I2**	Illness or loss of life;	3	The risk of severe weather is unlikely, when considering weather conditions recorded over the last 30 years within the area, This is outlined in the assessment in Chapter 30 . Operations and maintenance activities will be suspended as required in response to weather warnings.	1	The outcome of severe weather conditions during the Operational phase will result in a minor consequence in that 'small number of people would be affected' should a severe weather occur, with 'no fatalities and a small number of minor injuries with first aid treatment'.	3
J	**Sea Level Rise/Coastal Erosion**	Offshore Site The Offshore Site is not considered as there no potential risk from Sea Level Rise or Coastal Erosion	**J1**						

		Onshore Site Extreme weather periods taking into account climate change	**J2**	Coastal Flooding and Storm Surges Coastal Erosion	4	Coastal flooding is caused by higher sea levels than normal, largely as a result of storm surges, resulting in the sea overflowing onto the land. It is likely that climate change will have significant impacts on flooding and flood risk in Ireland due to rising sea levels, increased winter rainfall and more intense rainfall.	1	Coastal flood mapping has been completed for the Mid-Range and High-End Scenario of an increase in rainfall of 20% and 30% respectively, which includes a 0.5m and 1m rise in sea levels. The modelled flood zones associated with these future scenarios do not differ significantly to those described in the baseline in Appendix 23-1 FRA. Therefore, coastal flood zones at the Project site are unlikely to be significantly impacted by future climate change	4
K	**Utility emergencies**	Offshore Site Maintenance activity along proposed Offshore Export Cable route impacting on national services and utilities.	**K1**	Illness or loss of life; Disruption to services	2	Any cable crossings maintenance shall be completed in accordance with International Cable Protection Committee specifications. As such the risk of a utility emergency occurring during the operational phase of the Offshore Export Cable is considered very unlikely.	1	The risk of impact on utilities and services during the operational phase will result in a minor consequence in that 'small number of people would be affected, with 'no fatalities and a small number of minor injuries with first aid treatment'.	2
		Onshore Site Maintenance activity along proposed Onshore Grid Connection routes and road network impacting on local services and utilities	**K2**	Illness or loss of life; Disruption to services	2	It is not expected that any significant works will be required along the underground cabling element of the Onshore Grid Connection. As such the risk of a utility emergency occurring during the operational phase of the Onshore Grid Connection is considered very unlikely.	1	The risk of impact on utilities and services during the operational phase will result in a minor consequence in that 'small number of people would be affected, with 'no fatalities and a small number of minor injuries with first aid treatment'.	2

L	**Traffic/Vessel Incident**	Offshore Site Driver negligence or failure during vehicular operations Lack of route planning, vessel machinery failure or navigational error within or in close proximity to the OAA Extreme weather event	**L1**	Injury or loss of life. Spillage of oils/fluids	2	Maintenance vessels will be present in the vicinity and within the Offshore Site during the operational phase on occasion. Activities associated with the maintenance of WTGs, OSS, IAC and OEC may displace existing routes/activity and increase encounters and collision risk with other third-party vessels. Maintenance of the Offshore Site could lead to increased vessel densities within the area, in particular at times when major maintenance is required, which could in turn lead to an increase in vessel to vessel or vessel to infrastructure encounters and therefore increased collision or allision risk. The likelihood is considered to be very unlikely on the basis of compliance with the Convention on the International Regulations for Preventing Collisions at Sea (COLREGs) (International Maritime Organization (IMO), 1972/77) as outlined in Chapter 14 Shipping and Navigation	1	A minor consequence is predicted. where a 'small number of people would be affected' should a vessel collision occur, with 'no fatalities and small number of minor injuries with first aid treatment.'	2
		Onshore Site Driver negligence or failure during vehicular operations on Onshore Site roads (Public road network in which the OGC route is proposed). Traffic Management not implemented	**L2**	Injury or loss of life. Spillage of oils/fluids	2	Maintenance vehicles, LGVs and staff vehicles will be present within and around the Onshore Site during the operational phase. They will access the Onshore Site via the public road network and will therefore interact with local road users. As such, it can be determined that there is some 'opportunity, reason or means' for a vehicle collision during the operation of the Project, 'at some time.' Due to the very small volumes of traffic predicted a very unlikely risk is therefore predicted.	1	A minor consequence is predicted. where a 'small number of people would be affected' should a vehicular collision occur, with 'no fatalities and small number of minor injuries with first aid treatment.'	2

M	**Fire / Gas Explosion**	Offshore Site Equipment or infrastructure failure; Fuel spillage/ storage Electrical problems; and Employee negligence. Interactions with unidentified UXO	**M1**	Illness or loss of life; Damage to, or depletion of habitats and species; and Impacts on ambient air quality.	1	In accordance with Chapter 19 of the Safety, Health and Welfare at Work Act 2005 (the 2005 Act), the Project shall be subject to a fire safety risk assessment which would assist in the identification of any major risks of fire on-site, and mitigation of the same during operation. Chapter 5 and Appendix 5-4 outline the procedure to be followed in the unlikely event that an UXO is discovered within the Offshore Site. Based on pre-construction surveys, a UXO risk assessment conducted by the Applicant for the Offshore Site, the completion of UXO clearance prior to construction the potential for this risk during operation of the Offshore Site is extremely unlikely.	3	Should a fire/explosion occur at the Project, a serious consequence would result in that there would be a 'Significant number of people in affected area impacted with multiple fatalities , multiple serious or extensive injuries and significant hospitalisation. There will be 'normal community functioning' is the site is offshore with 'some inconvenience' to local vessel traffic. The 'generic command, control & co-ordination systems' as well as the 'common elements of response' detailed in the Galway County Council Major Emergency Plan will work to reduce the consequence (both on people and the environment) of potential fire/explosions at the Offshore Site.	3
		Onshore Site Equipment or infrastructure failure; Fuel spillage/ storage Electrical problems; and Employee negligence.	**M2**	Illness or loss of life; Damage to, or depletion of habitats and species; and Impacts on ambient air quality.	2	As outlined in Chapter 5, a limited volume of hydrocarbons and oils will be present during the operation of the OCC, and these will be stored in an appropriately bunded area. Therefore the risk is very unlikely.	2	Should a fire/explosion occur at the Project, a limited consequence is that there would be 'a limited number of people affected' with 'localised effects of short duration' on people and environmental receptors due to the nature of the Project and the lack of infrastructure or limited fuel storage during operation that would result in any such incident. There will be 'normal community functioning' in the area with 'some inconvenience' The 'generic command, control & co-ordination systems' as well as the 'common elements of response' detailed in the Clare County Council Major Emergency Plans will work to reduce the consequence (both on people and the environment) of potential fire/explosions at the Onshore Site.	4
N	**Collapse/ damage to structures**	Offshore Site Earthquake, land slide, extreme weather events; Allision between Project or third-party vessels and OAA infrastructure	**N1**	Injury or loss of life.	1	According to the Irish National Seismic Network (INSN), earthquakes measuring ~2 on the Richter Scale are "normal" in terms of seismicity in Ireland. These are known as microearthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. As such, structures are extremely unlikely to be damaged or collapse due to seismic activity. Operation of the Offshore Site could lead to minor increased vessel densities within the area, which could in turn lead to an increase in vessel to infrastructure encounters and therefore increased allision risk.	2	The risk of infrastructure collapse during the operational phase will result in a limited consequence in that 'a limited number of people affected' with 'localised effects of short duration' on people and environmental receptors due to the nature of the Offshore Site.	2

		Onshore Site Earthquake, land slide, extreme weather events; Vehicular collisions due to driver negligence on public roads. Traffic Management not implemented	**N2**	Injury or loss of life.	1	According to the Irish National Seismic Network (INSN), earthquakes measuring ~2 on the Richter Scale are "normal" in terms of seismicity in Ireland. These are known as microearthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. As such, buildings/structures in Ireland are extremely unlikely to be damaged or collapse due to seismic activity. The Project will utilise the existing road network during the operational phase. Having regard to public speed limits within the surrounding area of the Onshore Site, and that the majority of infrastructure is to be located underground, it is not predicted that any collision of vehicles and any infrastructure would result in significant damage/collapse.	2	The risk of infrastructure collapse during the operational phase will result in a limited consequence in that 'a limited number of people affected' with 'localised effects of short duration' on people and environmental receptors due to the nature of the Onshore Site.	2
Decommissioning Phase									
O	**Critical Infrastructure Emergencies**	Offshore Site Marine traffic incident at the decommissioning harbour during infrastructure removal or extreme weather periods of heavy rainfall, taking into account climate change and strong winds	**O1**	Marine traffic incident at the marshalling harbour during infrastructure delivery or extreme weather periods of heavy rainfall, taking into account climate change and strong winds impacting critical infrastructure	2	The risk of marine traffic accident during offshore infrastructure removal or port to vessel transfer and severe weather conditions severely impacting the identified transit route is very unlikely when considering the assessment in Chapter 30 Climate (weather conditions recorded over the last 30 years within the area) and Chapter 14: Shipping and Navigation and Appendix 5-10: Vessel Management Plan. In the case of severe weather being forecasted, the delivery schedule may be postponed to avoid these conditions, which may cause a delay in Project decommissioning timelines.	2	The outcome of a marine traffic accident due to severe weather conditions during the decommissioning phase will result in a limited consequence in that ' limited number of people affected; a few serious injuries with hospitalisation and medical treatment required.'.	4

		Onshore Site Extreme weather-periods of heavy rainfall, taking into account climate change and strong winds Accident or incident at Moneypoint Powerstation	**O2**	Traffic accident during infrastructure transportation impacting critical infrastructure or extreme weather periods of heavy rainfall, taking into account climate change and strong winds Accident or incident at a Moneypoint Power station.	2	Onshore Site The risk of traffic accident during infrastructure decommissioning and severe weather conditions severely impacting the identified road network is very unlikely when considering the assessment in Chapter 30 Climate (weather conditions recorded over the last 30 years within the area) and Chapter 29: Traffic and Transport (infrastructure delivery occurring during the night, Garda patrolled, etc). In the case of severe weather being forecasted, the delivery schedule may be postponed to avoid these conditions. The risk of the loss of grid connection infrastructure could occur due to severe weather such as strong winds or an incident at Moneypoint Powerstation (assumed to be operational at the time of Decommissioning)	2	Onshore Site The outcome of an incident/accident at the Money point site during the decommissioning phase will result in a minor consequence in that 'small number of people would be affected' with 'no fatalities and a small number of minor injuries with first aid treatment'. The risk of a traffic accident due to severe weather conditions during the decommissioning phase will result in a minor consequence in that 'small number of people would be affected' should a severe weather occur, with 'no fatalities and a small number of minor injuries with first aid treatment'. The risk of the loss of grid connection infrastructure will result in a minor consequence in that a 'small number of people' would be affected' with no fatalities and any minor injuries being treated by first aid treatment.	4
P	**Severe Weather**	Offshore Site Extreme weather-storms, periods of heavy rainfall, taking into account climate change, strong winds and lightning	**P1**	Illness or loss of life; Damage to, or depletion of aquatic habitats and species;	3	The risk of severe weather is unlikely when considering the assessment in Chapter 30 and weather conditions recorded over the last 30 years within the area. Possible fall from height from offshore working platforms/vessels may occur during serve weather. The works programme for the construction phase of the Project will take account of weather forecasts and predicted strong winds in particular and construction will be paused if required. Certain decommissioning works will be paused should a Status Orange weather warning be issued by Met Eireann, and all decommissioning works will be paused in the event of a Red weather warning alert be issued by Met Eireann as is standard practice	2	The outcome of severe weather conditions during the decommissioning phase will result in a limited consequence in that 'limited number of people would be affected' should a severe weather occur, with 'a few serious injuries with hospitalisation and medical treatment required'	6
		Onshore Site Extreme weather-storms, periods of heavy rainfall, taking into account climate change, strong winds and lightning	**P2**	Illness or loss of life; Damage to, or depletion of aquatic habitats and species;	3	The risk of severe weather is unlikely when considering the assessment in Chapter 30 and weather conditions recorded over the last 30 years within the area. Certain decommissioning works (i.e. working at height, any major groundworks, etc) will be paused should a Status Orange weather warning be issued by Met Eireann, and all decommissioning works will be paused in the event of a Red weather warning alert be issued by Met Eireann as is standard practice	1	The risk of severe weather conditions during the decommissioning phase will result in a minor consequence in that 'small number of people would be affected' should a severe weather occur, with 'no fatalities and a small number of minor injuries with first aid treatment'. Decommissioning will not require significant excavations works. There is no real likelihood of any impact on any environmental receptors	3

Q	**Sea Level Rise/ Coastal Erosion**	Offshore Site The Offshore Site is not considered as there no potential risk from Sea Level Rise or Coastal Erosion	**Q1**						
		Onshore Site Extreme weather periods taking into account climate change	**Q2**	Coastal Flooding and Storm Surges Coastal Erosion	4	Coastal flooding is caused by higher sea levels than normal, largely as a result of storm surges, resulting in the sea overflowing onto the land. It is likely that climate change will have significant impacts on flooding and flood risk in Ireland due to rising sea levels, increased winter rainfall and more intense rainfall.	1	Coastal flood mapping has been completed for the Mid-Range and High-End Scenario of an increase in rainfall of 20% and 30% respectively, which includes a 0.5m and 1m rise in sea levels. The modelled flood zones associated with these future scenarios do not differ significantly to those described in the baseline in Appendix 23-1: FRA. Therefore, decommissioning at the Onshore Site are unlikely to be significantly impacted by future climate change and the outcome would result in a minor consequence in that 'small number of people would be affected' with 'no fatalities and a small number of minor injuries with first aid treatment'.	4
R	**Utility emergencies**	Offshore Site Decommissioning activity along proposed OEC route impacting on national services and utilities.	**R1**	Illness or loss of life; Disruption to services	2	Any buried OEC will be left in situ, the decommissioning of any exposed cable at cable crossings shall be completed in accordance with International Cable Protection Committee specifications. As such the risk of a utility emergency occurring during the decommissioning phase of the OEC is considered very unlikely.	1	The risk of impact on utilities and services during the decommissioning phase will result in a minor consequence in that 'small number of people would be affected, with 'no fatalities and a small number of minor injuries with first aid treatment'.	2
		Onshore Site Decommissioning activity along proposed OGC routes and road network impacting on local services and utilities	**R2**	Illness or loss of life; Disruption to services	2	The OGC will disconnect from the grid prior to the occurrence of any decommissioning works. As such the risk of a utility emergency occurring during the decommissioning phase of the OGC is considered very unlikely.	1	The risk of impact on utilities and services during the decommissioning phase will result in a minor consequence in that 'small number of people would be affected, with 'no fatalities and a small number of minor injuries with first aid treatment'.	2

S	**Traffic/Vessel Incident**	Offshore Site Skipper negligence or failure of Vessel operations on transport routes Lack of route planning, vessel machinery failure or navigational error within or in close proximity to the OAA Extreme weather event	**S1**	Injury or loss of life. Damage to offshore infrastructure	2	Decommissioning vessels, including Restricted in their Ability to Manoeuvre (RAM) vessels will be present in the vicinity and within the Offshore Site during this phase. Activities associated with the construction of structures and cables may displace existing routes/activity and increase encounters and collision risk with other third-party vessels. Decommissioning of the Offshore Site could lead to increased vessel densities within the area, which could in turn lead to an increase in vessel to vessel or vessel to infrastructure encounters and therefore increased collision or allision risk. The likelihood is considered to be very unlikely on the basis of compliance with the Convention on the International Regulations for Preventing Collisions at Sea (COLREGs) (International Maritime Organization (IMO), 1972/77) as outlined in Chapter 14 Shipping and Navigation	2	A minor consequence is predicted. Liaison with vessels with regards to agreed routeing destinations/ berth/ anchorage will remain the navigational priority at all times i.e., the marine coordinator will provide project vessels with relevant information as opposed to direct instruction on routeing; a 'small number of people would be affected' should a vessel collision or allision occur, with 'no fatalities and small number of minor injuries with first aid treatment.' Any release of oils/fluids that might arise due to collision would have a localised effect.	4
		Onshore Site Driver negligence or failure of vehicular operations on Onshore Site roads (Public road network in which the Onshore Grid Connection route is proposed). Traffic Management not implemented	**S2**	Injury or loss of life. Damage to offshore infrastructure	2	A limited number of vehicles will be permitted on the Onshore Site as part of the decommissioning phase. As such, it can be determined that there is some 'opportunity, reason or means' for a vehicle collision to occur on the Onshore Site, 'at some time.' Throughout the decommissioning phase, traffic management measures will be implemented at the Onshore Site as outlined in the Traffic Management Plan (Appendix 29-2 An unlikely risk is therefore predicted.	1	A vehicle incident could cause limited pollution of soil or an adjacent watercourse by the release of oil or other fluids. A minor consequence is predicted. Having regard to on-site measures which will severely restrict vehicle speeds, a 'small number of people would be affected' should a vehicular collision occur, with 'no fatalities and small number of minor injuries with first aid treatment.'	2
T	**Fire / Gas Explosion**	Offshore Site Equipment or infrastructure failure; Electrical problems; and Employee negligence. Interactions with unidentified UXO	**T1**	Illness or loss of life; Damage to, or depletion of habitats and species; and Impacts on ambient air quality.	1	In accordance with Chapter 19 of the Safety, Health and Welfare at Work Act 2005 (the 2005 Act), the Project shall be subject to a fire safety risk assessment which would assist in the identification of any major risks of fire on site, and mitigation of the same during decommissioning. Chapter 5 and Appendix 5-4 ERCoP outline the procedure to be followed in the unlikely event that an UXO is discovered within the Offshore Site. Based on pre-construction surveys, a UXO risk assessment conducted by the Applicant for the Offshore Site, the completion of UXO clearance prior to construction the potential for this risk during operation of the Offshore Site is extremely unlikely.	3	Should a fire/explosion occur at the Project during this phase , a serious consequence would result in that there would be a 'Significant number of people in affected area impacted with multiple fatalities , multiple serious or extensive injuries and significant hospitalisation. There will be 'normal community functioning' is the site is offshore with 'some inconvenience' to local vessel traffic. The 'generic command, control & co-ordination systems' as well as the 'common elements of response' detailed in the Galway County Council Major Emergency Plan will work to reduce the consequence (both on people and the environment) of potential fire/explosions at the Offshore Site.	3

		Onshore Site Equipment or infrastructure failure; Electrical problems; and Employee negligence.	**T2**	Illness or loss of life; Damage to, or depletion of habitats and species; and Impacts on ambient air quality.	2	In accordance with Chapter 19 of the Safety, Health and Welfare at Work Act 2005 (the 2005 Act), the Project shall be subject to an updated fire safety risk assessment which would assist in the identification of any major risks of fire on site, and mitigation of the same during decommissioning. As outlined in Chapter 5, a limited amount of fuel may be stored on site in designated areas and bunded appropriately to ensure containment and prevent spillages of fuel. No fuels, chemicals or solvents will be stored outside of the confines of the Onshore Site during decommissioning and all fuels will be removed at the conclusion of this stage. Therefore the risk is very unlikely.	2	Should a fire/explosion occur at the Project, a limited consequence in that there would be 'a limited number of people affected' with 'localised effects of short duration' on people and environmental receptors due to the nature of the Project and the lack of infrastructure and limited fuel storage during decommissioning that would result in any such incident. There will be 'normal community functioning' in the area with 'some inconvenience' The 'generic command, control & co-ordination systems' as well as the 'common elements of response' detailed in the Clare County Council Major Emergency Plan will work to reduce the consequence (both on people and the environment) of potential fire/explosions at the Onshore Site.	4
U	**Collapse/ damage to structures**	Offshore Site Earthquake, land slide, extreme weather events; Allision between Project or third-party vessels and OAA infrastructure	**U1**	Injury or loss of life.	1	According to the Irish National Seismic Network (INSN), earthquakes measuring ~2 on the Richter Scale are "normal" in terms of seismicity in Ireland. These are known as microearthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. As such, structures are extremely unlikely to be damaged or collapse due to seismic activity. Decommissioning of the Offshore Site could lead to increased vessel densities within the area, which could in turn lead to an increase in vessel to infrastructure encounters and therefore increased allision risk.	2	The risk of infrastructure damage or collapse during the decommissioning phase of the Project will result in a limited consequence in that 'a limited number of people affected' with 'localised effects of short duration' on people and environmental receptors due to the nature of the Project.	2

		Onshore Site Earthquake, land slide, extreme weather events. Vehicular collisions due to driver negligence on public roads. Traffic Management not implemented.	**U2**	Injury or loss of life.	1	According to the Irish National Seismic Network (INSN), earthquakes measuring ~2 on the Richter Scale are "normal" in terms of seismicity in Ireland. These are known as microearthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. As such, buildings/structures in Ireland are extremely unlikely to be damaged or collapse due to seismic activity. Due to the transport of abnormal loads, i.e., OGC components, there is potential for road infrastructure collapse during delivery. This impact may be exacerbated by extreme weather i.e., severe wind storms and heavy precipitation resulting from climate change. The Project will utilise the existing road network during the decommissioning phase. Having regard to public speed limits within the surrounding area of the Onshore Site, and that the majority of infrastructure is to be located underground, it is not predicted that any collision between vehicles and any infrastructure would result in significant damage/collapse.	2	The risk of infrastructure damage or collapse during the construction phase of the Project will result in a limited consequence in that 'a limited number of people affected' with 'localised effects of short duration' on people and environmental receptors due to the nature of the Project.	2